

WHAT IS CLAIMED IS:

1. A distributed resource system, comprising:
 - a plurality of compute resource units operable to execute graphics applications and generate graphics data;
 - a plurality of visualization resource units communicatively coupled to the plurality of compute resource units and operable to render pixel data from the graphics data;
 - a first network;
 - a network compositor coupled to the plurality of visualization resource units via the first network and operable to receive the pixel data therefrom, the network compositor operable to synchronize the received pixel data from the plurality of visualization resource units and composite the synchronized pixel data into at least one image; and
 - a plurality of display devices at least one of which is located remotely from the plurality of compute resource units and coupled to the network compositor operable to display the at least one image.
2. The system, as set forth in claim 1, further comprising a second network coupling the plurality of display devices to the network compositor.
3. The system, as set forth in claim 1, wherein the plurality of visualization resource units comprise a graphics engine rendering the pixel data.
4. The system, as set forth in claim 1, wherein the plurality of visualization resource units comprise a plurality of local compositors coupled to a graphics engine operable to composite rendered pixel data into at least one image.
5. The system, as set forth in claim 1, wherein the plurality of display devices are operable to display at least one image across multiple display devices.
6. The system, as set forth in claim 1, further comprising a plurality of data storage devices coupled to the compute resource units.

7. The system, as set forth in claim 1, wherein the first network comprises an intranet.

8. The system, as set forth in claim 1, wherein the first network is selected from a group consisting of Internet, wide area network, local area network, and extranet.

9. The system, as set forth in claim 1, wherein the second network comprises an intranet.

10. A distributed resource system, comprising:

a plurality of distributed first resource units operable to generate a first set of data;

a plurality of second resource units operable to generate a second set of data in response to the first set of data;

a traffic controller located remotely from at least one of the plurality of second resource units and communicatively coupled to the plurality of second resource units and operable to collect the second set of data from the plurality of second resource units and synchronize the collected data; and

a plurality of display devices coupled to the traffic controller and operable to receive the synchronized data for display to a plurality of users.

11. The system, as set forth in claim 10, wherein the plurality of display devices are coupled to the plurality of first and second resource units via a network.

12. The system, as set forth in claim 10, wherein the traffic controller is coupled to the plurality of second resource units via a network.

13. The system, as set forth in claim 10, wherein the traffic controller is coupled to the plurality of second resource units via an intranet.

14. The system, as set forth in claim 10, wherein the traffic controller is coupled to the plurality of second resource units via a network selected from a group consisting of Internet, wide area network, local area network, and extranet.

15. The system, as set forth in claim 10, wherein the plurality of second resource units comprise a graphics engine rendering the pixel data.

16. The system, as set forth in claim 10, wherein the plurality of second resource units comprise a plurality of local compositors coupled to a graphics engine operable to composite rendered pixel data into at least one image.

17. The system, as set forth in claim 15, wherein the traffic controller comprises a network compositor coupled to the plurality of second resource units via a network and operable to receive the rendered pixel data therefrom, the network compositor operable to synchronize rendered pixel data for each image frame and composite the received pixel data into one or more images.

18. The system, as set forth in claim 10, wherein the plurality of display devices are located remotely from the plurality of first and second resource units.

19. A distributed resource system, comprising:

a plurality of first resource means executing at least one computer application and generating a plurality of first data;

a plurality of second resource means coupled to the plurality of first resource means for generating a plurality of second data from the plurality of first data received from the plurality of first resource means;

controller means coupled to the plurality of second resource means for receiving the plurality of second data therefrom and operable to synchronize and composite the plurality of second data; and

display means coupled to the controller means for receiving and displaying the synchronized and composited data therefrom.

20. The distributed resource system, as set forth in claim 19, wherein the plurality of second resource means comprise a graphics engine rendering pixel data.

21. The distributed resource system, as set forth in claim 19, wherein the plurality of second resource means comprise a plurality of local compositors coupled to a graphics engine operable to composite rendered pixel data into at least one image.

22. The distributed resource system, as set forth in claim 19, further comprising data storage means coupled to the first resource means for storing data.

23. The distributed resource system, as set forth in claim 19, wherein the controller means comprises a network compositor operable to receive pixel data from the second resource means and synchronize and composite the pixel data into a plurality of images for display on the display means.

24. The distributed resource system, as set forth in claim 19, wherein the controller means comprises a network compositor operable to receive pixel data from the second resource means, composite the pixel data into a plurality of images for display on the display means, and throttle those second resource means which are sending data substantially faster than other second resource means.

25. A distributed resource graphics processing method, comprising:
generating a plurality of sets of graphics data at geographically disparate locations;
rendering the plurality of sets of graphics data and generating a plurality of sets of rendered pixel data;

receiving the plurality of sets of rendered pixel data synchronizing the plurality of sets of pixel data for an image frame from different sources and compositing pixel data associated with the same image frames into at least one image; and

displaying the at least one image.

26. The method, as set forth in claim 25, wherein receiving the rendered pixel data comprises receiving the rendered pixel data at a central location located remotely from at least one of the geographically disparate locations.

27. The method, as set forth in claim 25, further comprising sending the rendered pixel data over an intranet to a network compositor operable to synchronize and composite the pixel data.

28. The method, as set forth in claim 25, further comprising sending the synchronized and composited pixel data over a network to a plurality of display devices operable to display the at least one image.

29. The method, as set forth in claim 25, wherein receiving and synchronizing the pixel data comprises:

- receiving a plurality of data packets from a plurality of sources;
- extracting the pixel data from the data packets;
- determining a frame identifier for the extracted pixel data; and
- compositing extracted pixel data having the same frame identifier.

30. The method, as set forth in claim 29, further comprising:
slowing down sources sending data packets substantially ahead of other sources;
storing extracted pixel data received ahead of time; and
compositing stored extracted pixel data with later-arriving extracted pixel data having the same frame identifier.

31. The method, as set forth in claim 30, wherein slowing down sources comprises sending a throttle control message to the sources.

32. A distributed graphics visualization architecture, comprising:
a plurality of compute resource units;
a plurality of graphics pipelines coupled to the plurality of compute resource units;
a plurality of local compositors coupled to the plurality of graphics pipelines;
a network compositor communicatively coupled to the plurality of local compositors via a network and operable to synchronize and composite graphics data received from the plurality of local compositors into at least one graphical image; and

a plurality of display devices coupled to the network compositors and operable to receive and display the at least one graphical image.

33. The architecture, as set forth in claim 32, wherein the plurality of display devices are coupled to the network compositor via a network.

34. The architecture, as set forth in claim 32, wherein the network coupling the network compositor to the plurality of local compositors comprises an intranet.

35. The architecture, as set forth in claim 32, wherein the network coupling the network compositor to the plurality of local compositors comprises the Internet.